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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,085	08/17/2007	William H. McNamee	118989-06068225	8794
20583	7590	11/22/2010	EXAMINER	
JONES DAY 222 EAST 41ST ST NEW YORK, NY 10017			VALDEZ, DEVE E	
			ART UNIT	PAPER NUMBER
			1765	
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			11/22/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/583,085	<b>Applicant(s)</b> MCNAMEE ET AL.	
	<b>Examiner</b> DEVE VALDEZ	<b>Art Unit</b> 1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 23-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 23-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over **CARPENTER** et al. (U.S. Patent Application Publication 2003/0153787, hereinafter

Art Unit: 1765

**CARPENTER**) in view of **BLOOM** et al. (U.S. Publication Application 2003/0187103, hereinafter **BLOOM**).

5. Regarding claims 23-31, **CARPENTER** teaches compounds of the formula (1):



Where:  $R^2$  is the residue of a groups having at least m active hydrogen atoms derived from hydroxyl and/or amino and/or amido groups; AO is an alkylene oxide residue; each n is independently from 2 to 200; m is 2-10; and each  $R^2$  is the residue of a group having at least m active hydrogen atoms derived from hydroxyl and/or amino and/or amido groups.  $R^3$  is H, hydrocarbyl, particularly a  $C_1$  to  $C_{22}$  alkyl or alkenyl. [0004-0013].  $R^3$  is H; hydrocarbyl; particularly  $C_1$  to  $C_{22}$  alkyl or alkenyl; a long chain alk(en)yl

succinic acyl group of the formula:  $—OC(HR)C(C(HR^1)).COY$

Where:

One of R and  $R^1$  in the succinic moiety is  $C_8$  to  $C_{22}$  alkenyl or alkyl and the other is hydrogen, and Y is a group OM where M is hydrogen, metal ammonium, amine especially alkylamine (including alkanolamines), or Y is  $NR^4R^5$  where  $R^4$  and  $R^5$  are each independently hydrogen, a hydrocarbyl, particularly alkyl group, including substituted alkyl, particularly hydroxyl substituted hydrocarbyl, especially polyhydroxy hydrocarbyl, such as hydroxyl substituted and especially polyhydroxy substituted alkyl, groups; a long chain acyl group  $-OC.R^6$  is along chain hydrocarbyl group, particularly a  $C_8$  to  $C_{22}$  alkyl or alkenyl group [0018-0029] (which would satisfy the acyl group). Also, suitable hydrocarbyl groups include lower alkyl groups, e.g.,  $C_1$  to  $C_6$  alkyl groups such

Art Unit: 1765

as methyl or ethyl groups, acting as chain end caps for one or more of the polyalkylene oxide chains mainly to alter the degree of hydrophilicity of the compounds, and longer chain alkyl or alkenyl groups e.g. C<sub>8</sub> to C<sub>22</sub> and particularly C<sub>16</sub> or longer, alkyl or alkenyl groups such as lauryl, oleyl and stearyl groups or mixed alk(en)yl groups derived from natural fats or oils [0067]. **CARPENTER** teaches R<sup>1</sup> is the residue of sorbitol, which is a monosaccharide [0055] (as required by claim 24-26). Furthermore, **CARPENTER** teaches the compounds can be made by reacting an alkoxyated polyhydric alcohol of the formula: R<sup>2</sup>[(AO)<sub>n</sub>.H]<sub>m</sub> where R<sup>2</sup>, AO, n, and m are as defined above, with an alkenyl succinic anhydride, and optionally, a reactive derivative of a fatty acid of the formula H<sub>2</sub>OC.R<sup>6</sup>, where R<sup>6</sup> is as defined, in molar ratios corresponding to the number of ASA and optional fatty acid residues desired in the product [0073]. However, **CARPENTER** does not teach the hydrocarbyl group comprising at least two ethylenic double bonds.

6. In the same field of endeavor of a latex paint composition, **BLOOM** teaches polyunsaturated fatty acid containing additives from vegetable oils (Abstract). Also, the latex paint composition contains a polyunsaturated fatty acid or derivative thereof chemically attached to an alcohol, the chemical attachment is through an ester, ether or urethane linkage [0050]. The term "polyunsaturated fatty acid or derivative thereof" as used herein refers to a polyunsaturated fatty acid moiety or an ester, ether, carbamate or amide derived from said polyunsaturated fatty acid moiety. Examples of a polyunsaturated fatty acid or a derivative thereof include polyunsaturated fatty acid mono-ester of glycols, such as linoleic acid mono-ester of ethylene glycol and linoleic

Art Unit: 1765

acid mono-ester of propylene glycol [0067]. The polyunsaturated fatty acid derivative behaves as a nonionic surfactant [0070] in latex paint composition.

7. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the polyunsaturated fatty acid or derivative thereof of **BLOOM** with the surfactant composition of **CARPENTER** for the benefit of reducing or eliminating the need for traditional water soluble additives that lower the water resistance of dry paint film and the polyunsaturated fatty acid moieties are capable of oxidative cross-linking during the curing process, forming a dry paint film that is more durable and water-resistant than traditional latex paint compositions. Furthermore, the polyunsaturated fatty acid derivative by virtue of its hydrophobicity behaves as a nonionic surfactant, and improves water resistance.

8. Regarding claims 32 and 33, **BLOOM** teaches polyunsaturated fatty acid such as linoleic acid therefore the properties are intrinsic.

9. Regarding claim 34, **BLOOM** teaches linoleic acid (which satisfies two ethylenic double bonds). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to optimize the proportions of fatty acids through routine experimentation for best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272,276,205 USPQ 215,219 (CCPA 1980). See also *In re Woodruff* 919 F.2d

Art Unit: 1765

1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F2d 454,456,105 USPQ 233,235 (CCPA 1955).

10. Claims 35-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over **CARPENTER** et al. (U.S. Patent Application Publication 2003/0153787, hereafter **CARPENTER**) in view of **BLOOM** in further view of **BOUVY** et al. (U.S. Patent No. 6,780,910, hereinafter **BOUVY**).

11. Regarding claims 35-41, the combined disclosures of **CARPENTER** and **BLOOM** are considered to render the invention of claim 1 obvious, see paragraphs 5-8, however, the combined disclosures fail to teach an aqueous emulsion or dispersion of polymeric particles wherein the emulsion or dispersion is formed in the presence of a stabilizing amount of a mixture of compounds represented by formula I.

12. Regarding claims 35- 41, **BOUVY** teaches an aqueous emulsion or dispersion of polymeric particles comprising a compound of formula (I) as defined in claim 35 (Abstract; Col. 1, lines 54-67; Col. 4, lines 57-67) (as required by claim 36. **BOUVY** teaches an aqueous emulsion or dispersion of polymeric particles wherein the polymeric particles comprise an alkyd resin (Abstract; Col. 1, lines 55-67; Col. 4, lines 40-55) (as required by claim 37). Also, **BOUVY** teaches the alkyd resin is a resin which is the reaction product of (i) one or more polybasic organic acids or anhydrides, (ii) one or more monobasic fatty acid and one or more polyhydric alcohols (Col. 2, lines 52-60) (as required by claim 38). Furthermore, **BOUVY** teaches an aqueous emulsion of an alkyd resin which includes as an emulsifier a compound of formula (1) as defined in claim 1 in

Art Unit: 1765

combination with an anionic surfactant, particularly an ether carboxylate, an alkyl aryl sulphonate, a phosphate ester, an alkyl ether sulfate, or a mixture of these surfactants, where the weight ratio of compound(s) of the formula (1) to anionic surfactant is in the range 90:10 to 10:90 (Column 3, lines 11-46) (as required by claim 39). **BOUVY** teaches a method of making an aqueous emulsion of an alkyd resin which comprises forming a mixture of the resin and surfactant, including at least one compound of formula as defined in claim 35, including water in the mixture to form a water-in-oil emulsion, and subsequently adding water to the water-in-oil emulsion at least until the emulsion inverts to form an oil disperse phase content of the emulsion to that desired (Column 5, lines 1-9) (as required by claim 40). **BOUVY** teaches polyester resins are well known with wide uses in surface coating such as paints (Column 1, lines 14-15) (as required by claim 41).

13. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have an aqueous emulsion or dispersion as taught by **BOUVY** with the surfactant compositions of **CARPENTER** and **BLOOM** for the benefit of producing alkyd resin emulsions which exhibits excellent properties in surface coatings.

### ***Response to Arguments***

14. Applicant's arguments filed 09/03/2010 have been fully considered but they are not persuasive. The response is insufficient to rebut the prima facie case obviousness rejection. Despite the applicant's arguments in view of the teachings of prior art of record, the position is maintained. The applicant argues that neither reference suggests that Carpenter's alkenyl succinic acid groups may be exchanged with **BLOOM's**



Art Unit: 1765

polyunsaturated fatty acid mono-ester of glycols. The examiner has considered the applicant's argument, however, **CARPENTER** teaches the compounds can be made by reacting an alkoxylated polyhydric alcohol of the formula:  $R^2[(AO)_n.H]_m$  where  $R^2$ , AO, n, and m are as defined above, with an alkenyl succinic anhydride, and optionally, a reactive derivative of a fatty acid of the formula  $H_2OC.R^6$ , where  $R^6$  is as defined, in molar ratios corresponding to the number of ASA and optional fatty acid residues desired in the product [0073]. Therefore it would have been obvious to utilize the polyunsaturated fatty acid or derivative thereof such as linoleic acid and linolenic acid of **BLOOM** for the polyunsaturated fatty acid derivative's hydrophobicity and water resistant properties [0070]. It is prima facie obvious to combine individually old ingredients for their known additive function, i.e., it is obvious to add a known ingredient for its known function; *In re Linder* 173 USPQ 356; *In re Dial et al.* 140 USPQ 244. Furthermore, it would have been obvious to a person of ordinary skill in the art to utilize compounds having at least 1.2 groups/molecules given that **CARPENTER** teaches the molar ratios of the fatty acids residues can be virtually any amount depending on the desired product.

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 1765

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEVE VALDEZ whose telephone number is (571)270-7738. The examiner can normally be reached on Mon-Thurs, 7:30pm-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

//DEVE VALDEZ/

Application/Control Number: 10/583,085

Page 10

Art Unit: 1765

/Rabon Sergeant/

Primary Examiner, Art Unit 1765